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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/407,569	09/28/1999	BARRY SHEPARD	10836.39US01	2929

22854 7590 08/11/2005

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 MINNEAPOLIS, MN 55402

EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT	PAPER NUMBER
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3639

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/407,569

Applicant(s)

SHEPARD ET AL.

Examiner

Akiba K. Robinson-Boyce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 120, 122, 139, 141, 157 and 159 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 120, 122, 139, 141, 157 and 159 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Claims***

1. In response to the communication received on 5/31/05, the following is a non-final office action. Claims 1-119, 121, 123-138, 140, 142-156, 158, and 160-167 have been cancelled. Claims 120, 122, 139, 141, 157 and 159 have been amended. Claims 120, 122, 139, 141, 157 and 159 remain pending in this application and have been examined on the merits. Claims 120, 122, 139, 141, 157 and 159 are rejected. The previous rejection has been withdrawn and the following reflects the claims as amended.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 120, 122, 139, 141, 157 and 159 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "that influence human behavior" in claims 122, 139, 141, 157 and 159 is a relative phrase that renders the claims indefinite. The term "that influence human behavior" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Because the term "that influence human behavior" is used, the entire claim and the scope of the invention

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unclear. In the instant case, it is not definite that the sensory cues will influence human behavior for all humans.

The phrase "that is potentially not discernable" in claims 120, 122, 139, 141, 157 and 159 is a relative phrase that renders the claims indefinite. The term "that is potentially not discernable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Because the term "that is potentially not discernable" is used, the entire claim and the scope of the invention unclear. In the instant case, it is not clear as to how the computer system is picking up and doing analysis if the actual respondent perceptions are potentially not discernable.

#### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 120, 122, 139, 141, 157 and 159 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of :

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural

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phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful art" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim, the recited process must somehow apply, involve, use, or advance the technological arts.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result

In the present case, claims 120, 139, and 157 are all directed to a method, an apparatus, and an article of manufacture for managing consumer perceptions related to preferences for a plurality of sensory stimulus representation of interest to respondents associated with a target focus group and determining perception management. Claims 120, 139 and 157 recite the steps of "presenting a sensory stimulus...", "inputting by the respondents into the computer system classification information...", and "aggregating the classification information...", "correlating the aggregated classification information...", "processing the classification information...", "presenting an initial desired perception...", "collecting respondent observations...", "identifying a highest-ranked sensory...", "wherein the computer system infers...". These steps are in the technological arts, but they do not produce a concrete result, since the relationship between the sensory stimulus representation and the actual respondent perceptions will vary. Because of the nature of varying subjectivity in these claims, the end result is not a concrete result, and these claims are therefore non-statutory.

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In the present case, claims 122, 141, and 159 are all directed to a method, an apparatus, and an article of manufacture for managing consumer perceptions related to preferences for a plurality of sensory stimulus representation of interest to respondents associated with a target focus group and determining perception management. Claims 122, 141 and 159 recite the steps of "presenting a sensory stimulus...", "inputting by the respondents into the computer system classification information...", and "aggregating the classification information...", "correlating the aggregated classification information...", "creating a set of sensory stimulus.....", "presenting a perceptual map...", "receiving input...", "analyzing the correlation...", "refining the correlation...", "wherein the computer system infers...". These steps are in the technological arts, but they do not produce a concrete result, since the relationship between the sensory stimulus representation and the actual respondent perceptions will vary. Because of the nature of varying subjectivity in these claims, the end result is not a concrete result, and these claims are therefore non-statutory.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 120, 122, 139, 141, 157 and 159 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zaltman (US 5,436,830), and further in view of Frost (US 5,041,972).

As per claims 120, 139, and 157, Zaltman discloses:

Presenting/present a sensory stimulus representation through a computer system to a plurality of respondents..., the sensory stimulus representation embodying one or more sensory cues that influence human behavior/present a sensory stimulus representation through a computer system, (Col. 3, lines 16-20, [sensory stimuli used to understand customer thinking, where the pictures represent the cues]).

Inputting by/receive as input from the respondents into the computer system classification information representing an actual respondent perception elicited in the respondents in response to the one or more sensory cues presented to the respondents.../receive as input from the customers classification information, (col. 2, lines 10-13, [sensory input elicited], w/ col. 4, lines 31-36, [using keyboard input to designate groups]).

Aggregating/aggregate the classification information input by the respondents to derive aggregated classification information representative of respondent perceptions/aggregate the classification information input by the customers, (Col. 9, lines 50-54, [aggregating into a consensus map]);

Correlating/correlate the aggregated classification information with the one or more sensory cues using the computer system/correlate the aggregated classification

information, (col. 12, lines 14-16, [eliciting and storing baseline image that correlates closest with research topic]);

Presenting/present an initial desired perception and different sensory stimulus representations to be chosen by one or more respondents as representatives that reinforce the initial desired perception, (col. 7, lines 14-25 and lines 54-62, shows initial images are stored and selected for evaluation, also shows elicitation of additional constructs and sensory images).

wherein the computer system infers, as a function of a correlation of the aggregated classification information and the one or more sensory cues, a relationship between the sensory stimulus representations and the actual respondent perceptions that is potentially not discernable to a human researcher, (col. 12, lines 23-25, [generating a graphical representation of relationships among stored images which represent the sensory stimulus representations and constructs, where constructs are elicitations from consumers and represent the actual respondent perceptions]).

Zaltman does not disclose respondents having a statistically significant sample size, but does disclose a set of customers that have information elicited from them in order to construct marketing campaigns in the abstract, lines 1-2.

However, Frost discloses:

respondents having a statistically significant sample size, (Col. 2 lines 54-60, sample of consumers interviewed that is statistically represented). Frost discloses this limitation in an analogous art for the purpose of showing that market researchers choose sets of consumers to provide samples.



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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for respondents to have a statistically significant sample size with the motivation of showing that consumer perceptions can be derived from select consumers.

Zaltman does not disclose the classification information locating the sensory stimulus representation relative to at least one dimensional axis representing a range between a desired respondent perception and a differentiated respondent perception conceptually related to the desired respondent perception, but does disclose the generation of a graphical representation of relationships among images and constructs col. 12, lines 23-24, where similarities and differences in the images are explored as the user sorts and selects images into groups in Col. 10, lines 37-52.

However, Frost discloses:

The classification information locating the sensory stimulus representation relative to at least one dimensional axis representing a range between a desired respondent perception and a differentiated respondent perception conceptually related to the desired respondent perception, (col. 11 lines 15-33, shows resulting change in an evaluation is reflected by the resultant relocation of the point of preference, and shows that the relocation points are measured by the Euclidean distances of those points from the reference points). Frost discloses this limitation in an analogous art for the purpose of determining to what extent that each attribute describes a given fragrance used in related consumer products, where the attribute information in Frost represents the classification information.

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the classification information to locate the sensory stimulus representation relative to at least one dimensional axis representing a range between a desired respondent perception and a differentiated respondent perception conceptually related to the desired respondent perception with the motivation of determining the difference a respondent's perception has in relation to a desired response.

Zaltman fails to disclose processing the classification information, but does disclose classifying in col. 2, lines 10-13, [sensory input elicited], w/ col. 4, lines 31-36, [using keyboard input to designate groups]).

However Frost discloses:

Processing/process the classification information, (Col. 8, lines 55-67, each item "A" through "F" are measured and processed by a squeeze analysis). Frost discloses this limitation in an analogous art for the purpose of showing the likelihood of purchasing and item.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to process the classification information in order to make use of the classification information.

Zaltman fails to disclose Collecting/collect respondent observations and rationale for ranking of the chosen sensory stimulus representations, but does disclose eliciting a customer for constructing advertising/marketing campaigns in the abstract, lines 1-2.

However Frost discloses:

Collecting/collect respondent observations and rationale for ranking of the chosen sensory stimulus representations, (Col. 8, lines 45-53, [where the rationale is represented by the degree of preference]). Frost discloses this limitation in an analogous art for the purpose of showing the reason why a customer may have ranked a representation.

It would have been obvious to one of ordinary skill in the art to collect respondent observations and rationale for ranking the chosen visual representations with the motivation of determining the meaning of why certain representations were chosen.

Zaltman fails to disclose identifying a highest-ranked sensory stimulus representation as best representing the initial desired perception, but does disclose classifying in col. 2, lines 10-13, [sensory input elicited], w/ col. 4, lines 31-36, [using keyboard input to designate groups]).

However, Frost discloses:

Identifying/identify a highest-ranked sensory stimulus representation as best representing the initial desired perception, (Col. 8, lines 50-67, shows ranking of the automobile brands which are associated with descriptors [as shown in Col. 7, lines 35-38] in order to determine the likelihoods of purchasing each item from the greatest to the least, in this case, the descriptors represent the sensory stimulus). Frost discloses this limitation in an analogous art for the purpose of showing that both the descriptor and the list of items by brand are randomly chosen for communication to the interviewed consumer and that each item is evaluated with respect to each descriptor.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to identify a highest-ranked sensory stimulus representation as best representing the initial desired perception with the motivation of determining the stimulus that the consumers favor most.

As per claims 122, 141, 159, Zaltman discloses:

Presenting/present a sensory stimulus representation through a computer system to a plurality of respondents..., the sensory stimulus representation embodying one or more sensory cues that influence human behavior/present a sensory stimulus representation through a computer system, (Col. 3, lines 16-20, [sensory stimuli used to understand customer thinking, where the pictures represent the cues]).

Inputting by/receive as input from the respondents into the computer system classification information representing an actual respondent perception elicited in the respondents in response to the one or more sensory cues presented to the respondents.../receive as input from the customers classification information, (col. 2, lines 10-13, [sensory input elicited], w/ col. 4, lines 31-36, [using keyboard input to designate groups]).

Aggregating/aggregate the classification information input by the respondents to derive aggregated classification information representative of respondent perceptions/aggregate the classification information input by the customers, (Col. 9, lines 50-54, [aggregating into a consensus map]);

Correlating/correlate the aggregated classification information with the one or more sensory cues using the computer system/correlate the aggregated classification

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information, (col. 12, lines 14-16, [eliciting and storing baseline image that correlates closest with research topic]);

Creating/create a set of sensory stimulus/ create a set of related sensory stimulus representations that leverage the at least one cue perceived by the respondents in response to the presented sensory stimulus representation, (Col. 4, lines 38-45, [sensory images that are represented by an *array* of sounds, colors, shapes and descriptions of smells, touches, etc.]);

Presenting/present a perceptual map using the output device, (Col. 12, lines 26-31, [deriving and visually presenting a consensus map]).

Receiving/receive input from the respondents regarding correlation of the set of sensory stimulus representations with the perceptual map, (Col. 12, lines 14-16, [eliciting and storing of a baseline image from the consumer that correlates closest with the topic]).

wherein the computer system infers, as a function of a correlation of the aggregated classification information and the one or more sensory cues, a relationship between the sensory stimulus representations and the actual respondent perceptions that is potentially not discernable to a human researcher, (col. 12, lines 23-25, [generating a graphical representation of relationships among stored images which represent the sensory stimulus representations and constructs, where constructs are elicitations from consumers and represent the actual respondent perceptions]).

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Zaltman does not disclose respondents having a statistically significant sample size, but does disclose a set of customers that have information elicited from them in order to construct marketing campaigns in the abstract, lines 1-2.

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for respondents to have a statistically significant sample size with the motivation of showing that consumer perceptions can be derived from select consumers.

Zaltman does not disclose the classification information locating the sensory stimulus representation relative to at least one dimensional axis representing a range between a desired respondent perception and a differentiated respondent perception, conceptually related to the desired respondent perception, but does disclose the generation of a graphical representation of relationships among images and constructs col. 12, lines 23-24, where similarities and differences in the images are explored as the user sorts and selects images into groups in Col. 10, lines 37-52.

However, Frost discloses:

The classification information locating the sensory stimulus representation relative to at least one dimensional axis representing a range between a desired

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respondent perception and a differentiated respondent perception conceptually related to the desired respondent perception, (col. 11 lines 15-33, shows resulting change in an evaluation is reflected by the resultant relocation of the point of preference, and shows that the relocation points are measured by the Euclidean distances of those points from the reference points). Frost discloses this limitation in an analogous art for the purpose of determining to what extent that each attribute describes a given fragrance used in related consumer products, where the attribute information in Frost represents the classification information.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the classification information to locate the sensory stimulus representation relative to at least one dimensional axis representing a range between a desired respondent perception and a differentiated respondent perception conceptually related to the desired respondent perception with the motivation of determining the difference a respondent's perception has in relation to a desired response.

Zaltman fails to disclose analyzing/analyze the correlation of the set of sensory stimulus representations with the perceptual map; and refining the correlation of the set of sensory stimulus representations with the perceptual map as a function of the analysis, but does disclose classifying in col. 2, lines 10-13, [sensory input elicited], w/ col. 4, lines 31-36, [using keyboard input to designate groups]).

However Frost discloses:

Analyzing/analyze the correlation of the set of sensory stimulus representations with the perceptual map; and refining the correlation of the set of sensory stimulus

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representations with the perceptual map as a function of the analysis, Col. 19, line 28- Col. 20, line 14, performing an independence factor analysis of the attributes incorporated by the perceptual map created, where the points representing attributes are plotted with respect to the ability of the respective attributes, w. col. 20, lines 25-33, representing the change in the relative preference for each given fragrance on the perceptual map). Frost discloses these limitations in an analogous art for the purpose of providing a way for users to visualize attributes to provide a bases for consumers to distinguish one reference fragrance from other reference fragrances.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to analyze the correlation of the set of sensory stimulus representations with the perceptual map; and refining the correlation of the set of sensory stimulus representations with the perceptual map as a function of the analysis in order to represent the sensory stimuli in a visual form.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 107-110, 112, 115, 116, 117, 119, 121, 123-129, 131, 134, 135, 136, 138, 140, 142-147, 149, 152-154, 156, 158, and 160-167 have been considered, but due to the applicant's amendment, are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is



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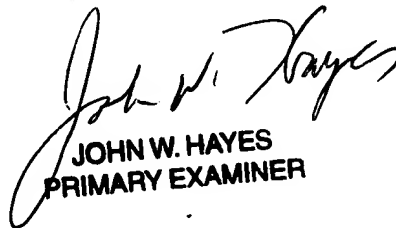
571-272-6734. The examiner can normally be reached on Monday-Tuesday 8:30am-5pm, and Wednesday, 8:30 am-12:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A.R.B.

A. R. B.  
July 27, 2005

  
JOHN W. HAYES  
PRIMARY EXAMINER